the series of sections and the models, they were infinitely better than long-winded descriptions for which physicians generally had neither time nor patience. The drawings were open to entries and corrections and the best field of registration of observations. There was, of course, no loop-hole for the haziness with which so many errors pass under the cover of words. One's interpretations show here their natural and indelible color.

Dr. Meyer wished to express his sincere thanks for the increasing care and accuracy with which his colleagues in the State Hospitals furnish both the brain material and the records, and trusted that the return which the Institute was able to give would be a still further stimulus; he also hoped that one or the other of the neurologists present might take an interest in these methods of brain-study and enter into co-operation with the Institute. Well defined, small enough lesions in the Marchi period, i.e., from 3-6 weeks after the onset, were so rare, and the result of their study so dependent on well organized technique, that the material should pass into skilled hands as often and as rapidly as possible. especially since a delay of more than two weeks makes a Marchi reaction with formalin specimens questionable.

DEMONSTRATION OF A NEW METHOD OF BRAIN RECONSTRUCTION.

By Dr. B. Onuf.

The method made it possible to reconstruct fiber tracts and study them in their relation to the surface or other parts of the brain. Particular advantages were offered for studying the Island of Reil, which could be fully demonstrated in its relation to the surface of the brain. It was possible, furthermore, by means of this method, to reconstruct from a series of brain sections of a given direction, say sagittal, for instance, sections in other planes, such as horizontal and vertical ones. Thus from one and the same brain, horizontal, vertical and sagittal sections from any desired level could be obtained. The results of the method could be utilized for publication when desired, which was a distinct advantage of the procedure.

Dr. Alfred Reginald Allen said the beauty and value of Dr. Meyer's work was apparent. The only suggestion he had to make was that if a whiter quality of glass were used, a glass which would not possess quite so much the property of a light filter, these wonderfully instructive preparations could be made the subject of stereoscopic photography, and in that way used as illustrations.

SOME CLINICAL OBSERVATIONS ON THE TREATMENT OF GRAVES' DISEASE.

By Dr. J. Arthur Booth.

The author offered the following conclusions:

1. Although Graves's disease is recognized by the prominence of four symptoms, namely, tachycardia, exophthalmos, goitre and tremor, this symptom-complex may be incomplete in the developmental stage of the disease, and here the other symptoms are sufficient for the diagnosis.

2. At the time of the first examination, the degree of thyroid intoxication should be noted, and the patient then placed, if possible, under one of the three clinical groups.

3. The prognosis depends upon heredity, the social position of the individual, the type of the disease and its early recognition. All these conditions being favorable, with good care and perseverance, there is a fair chance of recovery in those patients classed in the first group. The more advanced cases stand a better chance of recovery by operation, but this must not be delayed too long, lest organic changes have already set in.

4. Recent clinical and experimental data still further emphasizes the general belief that over-activity of the thyroid gland is quite sufficient to explain the appearance of the symptoms of Graves' disease, and their disappearance after operation.

5. Thyroidectomy should be the operation of choice, as giving the best results.

6. The cause of death following operation is shock and the use of a general anesthetic; therefore, this should be placed in only expert hands, and local anesthesia should be employed when possible.

7. The introduction of cytotoxic serum marks an important advance in the treatment of the disease, and perhaps may ultimately prove to be the only rational therapeutic method.

Dr. Gordon said he was astonished to hear the speaker reporting such brilliant results from thyroid treatment. He had treated quite a number of cases of exophthalmic goitre with thyroid extract, and while the patients improved for a time, the final result was disappointing. As to the question of the pathogenesis of the disease, he wished to mention that about two years ago, he had shown at a meeting of the Philadelphia Neurological Society a woman who, while apparently in perfect health, developed ptosis, which was soon followed by an internal strabismus; three or four days later she noticed a bulging of the eyes, tachycardia and enlargement of the thyroid gland. He had in mind also another in which a goitre was associated with paralysis agitans. The literature contains abundant examples of Graves' disease developed in the course of organic nervous affections.

Dr. Gordon said he regarded it as a mistake to hold the thyroid gland responsible for all the symptoms of Graves' disease. As a matter of fact, he looked upon the changes and degeneration in the thyroid as secondary, and that the primary focus of the disease was in the medulla. Dr. Booth, in his paper, made no reference to the work of Jonnesco and others, who operated on a number of these cases, removing the cervical sympathetic ganglia and the latter was followed by total disappearance of Graves' syndrome. The nervous origin of the disease is therefore also evident from the therapeutic results.

Dr. Sinkler said he had had practically no experience with the operative or serum treatment of exophthalmic goitre. He could recall a number of cases in which recovery took place under absolutely no form of therapeutics. It was a fact that a much larger percentage of those patients recovered than was generally supposed.

Dr. Allen said that apropos of the last picture shown on the screen by Dr. Booth he wished to call attention to the fact that three years ago, when he was sent to investigate the Goitre Colony in Indiana

County, Penn., out of seventy odd cases of goitre that he had examined, he had found only one among them that showed any of the usual symptoms of Graves' disease.

Dr. Booth, in closing, said the changes in the medulla to which Dr. Gordon had referred, were doubtless secondary, as are also similar changes found in other tissues of the body. Besides, no such changes are found in the earlier stages of the disease, while on the other hand there has been no death recorded without involvement of the thyroid gland.

The speaker said he had used the anti-thyroid serum in seven cases. One of these was cured, two were improved, and in the others no results had been noticed.

TOBACCO AS A CAUSE OF NERVOUS DISEASE—EXPERIMENTAL OBSERVATIONS.

By Dr. L. Pierce Clark.

1. It is fairly proven that tobacco is primarily a cardio-vascular poison.
2. Its acute toxic effects on the neuro-muscular apparatus are first as an excitant and mild convulsant; second, as a motor nerve depressant; and, finally, a paralyzant of the central and peripheral nerves of the heart and lungs.
3. Its chronic toxic effect on the nervous system (as yet so inaccurately studied), is to induce toxic congestion of the brain, spinal cord and peripheral nerves, inducing finally, in the latter, a mild type of degenerative neuritis.
4. The toxic coefficient, even in animals, under strict test, is so very variable as to vitiate many of the attempts to derive any definite conclusions of its effects on the nervous system in man.

CLINICAL OBSERVATIONS.

By Dr. B. Sachs.

In discussing this phase of the influence of tobacco on the nervous system, the speaker said the chief points which he hoped to establish were that tobacco did exert a most pernicious influence on the heart and the circulatory organs, and that it was a very important factor in the production of functional nervous disease, but that it did not play any sort of rôle in the causation of organic diseases of the nervous system, and that many of the disturbances of the nervous system were due, not to the direct influence of the tobacco upon it, but that the changes and morbid conditions were brought about indirectly through the effect that tobacco had upon the various parts of the circulatory system. Even the question as to which was the toxic element producing the harm done by smoking was not easily settled. Most of us would off-hand claim that it was due to nicotine, the alkaloid contained in the tobacco leaf, but Nessler had shown that Syrian tobacco, which was said to have a strong toxic effect, contained no nicotine whatever. Havana tobacco, the tobacco imported from Porto Rico, contained only 1.6 to 1.2 per cent. of nicotine, whereas some of the German tobacco, which was supposed to be as mild as any, contained 3.36 per cent.

In the causation of purely functional derangement, the excessive